

HUMAN EYE

1. In eye, the focusing is done by:
 (A) to and fro movement of the eye lens (B) to and fro movement of retina
 (C) change in the convexity of the lens (D) change in refractive index of the eye fluid
2. The persistence of vision of the eye is:
 (A) 1/16 second (B) 1/10 second (C) 1 second (D) 1/4 second
3. While looking at nearby objects, the muscle _____ so as to _____ the focal length of eye lens.
 (A) Contracts, increase (B) Relax, increase
 (C) Contracts, decrease (D) Relax, decrease
4. The focal length of eye lens is controlled by
 (A) Iris (B) Cornea (C) Ciliary Muscles (D) Optic nerve

Direction: In each of the following questions, a statement of Assertion is given by the corresponding statement of Reason. Of the statements, mark the correct answer as

- (A) If both Assertion and Reason are true and Reason is the correct explanation of Assertion.
 (B) If both Assertion and Reason are true, but Reason is not the correct explanation of Assertion.
 (C) If Assertion is true, but Reason is false.
 (D) If Assertion is false, but Reason is true.

5. Assertion(A): It is not possible to see a virtual image by eye.
 Reason (R): The rays that seem to emanate from a virtual image do not in fact emanates from the image.
6. Assertion(A): A normal human eye can clearly see all the objects beyond certain minimum distance.
 Reason (R): The human eye has capacity of adjusting the focal length of eye lens.
7. The sequence of spectrum of colours formed by dispersion of white light through a prism is:
 (A) VIBGYOR from top to bottom (B) VIBGYOR from bottom to top
 (C) ROYGBIV from bottom to top (D) Both B & C
8. Astigmatism can be rectified by a suitable _____ Lens.
 (A) Concave (B) Convex (C) Cylindrical (D) None of the above
9. Placement of another identical prism in an inverted position with respect to the first and allowing the colours of spectrum to pass through it will
 (A) Change the spectrum into white light
 (B) Change the spectrum into a black band
 (C) Keep the spectrum as before
 (D) Split into more colours
10. Cylindrical lens is used in case of:
 (A) myopia (B) hypermetropia (C) presbyopia (D) astigmatism
11. Convex lens is used in case of:
 (A) myopia (B) hypermetropia (C) Cataract (D) astigmatism

12. Concave lens is used in case of:
 (A) myopia (B) hypermetropia (C) Cataract (D) astigmatism

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13. Assertion (A): Sky appears in blue colour.
 Reason (R): Blue colour in sunlight travelling through atmosphere undergoes maximum scattering.
14. Assertion (A): The Sun appears white when it is overhead in the sky.
 Reason (R): Light coming from the Sun has to travel a relatively shorter distance through the atmosphere to reach us.
15. Assertion (A): When white light passes through a glass prism, red colour is deviated the least.
 Reason (R): Red colour has the minimum speed in the glass prism.
16. Assertion (A): The “danger” signal lights are red in colour.
 Reason (R): Red colour is the having longest wavelength, it is the least scattered.
17. Assertion (A): A rainbow is always formed in the sky after a rain shower and in the same direction as sun.
 Reason (R): Water droplets act like tiny prisms.
18. Assertion (A): The sun’s disc appears to be fattened at sunrise and sunset.
 Reason (R): The sun is near the horizon at sunrise and sunset and sunlight suffers atmospheric refraction.
19. Assertion(A): White light is dispersed into its seven-colour components by a prism.
 Reason (R): Different colours of light bend through different angles with respect to the incident ray as they pass through a prism.
20. Assertion(A): The phenomenon of scattering of light by the colloidal particles gives rise to Tyndall effect.
 Reason (R): The colour of the scattered light depends on the size of the scattering particles.
21. Assertion(A): A rainbow is sometimes seen in the sky in rainy season only when observer’s back is towards the Sun.
 Reason (R): Internal reflection in the water droplets cause dispersion and the final rays are in backward direction.
22. Assertion (A): Myopia is the defect of the eye in which only nearer objects are seen by the eye.
 Reason (R): The eye ball is elongated.
23. Assertion(A): Hypermetropia is the defect of the eye in which only farther objects are seen.
 Reason (R): Hypermetropia is corrected by using converging lens.
24. Assertion(A): Danger signals are made of red colour.
 Reason (R): Velocity of red light in air is maximum, so signals are visible even in dark.

25. Assertion(A): The sky looks dark and black instead of blue in outer space.
Reason (R): No atmosphere containing air in the outer space to scatter sunlight.
26. Assertion (A): The stars twinkle, while the planets do not.
Reason (R): The stars are much bigger in size than the planets.
27. Assertion (A): Blue colour of sky appears due to scattering of blue colour.
Reason (R): Blue light has longer wavelength.